

**Ackerman, Joyce**

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**From:** Dave Folkes <DFolkes@Geosyntec.com>  
**Sent:** Thursday, November 30, 2017 3:14 PM  
**To:** Ackerman, Joyce; Curtis Stovall - CDPHE; Walker - CDPHE, David; MacGregor - CDPHE, Kelly; jason.king@coag.gov; Henderson, Jerry; martin.ograde@state.co.us; ajkrieger@erieco.gov; fdiehl@erieco.gov; mostholthoff@erieco.gov; khansen@erieco.gov; tbjerkaas@erieco.gov; rdean@stratuscompanies.com; bfrissell@co.weld.co.us; Thomas J. Krasovec; Dave Stewart; Steeler Jon; Piggott, Amelia; O'Reilly, Maureen; Fronczak, David; Ketellapper, Victor; Jenkins, Katherine  
**Subject:** RE: Neuhauser Landfill Site: EPA comments on Draft Drum Removal Work Plan  
**Attachments:** Response to EPA comments on Drum Removal Work Plan 11-30-17.pdf

Dear Joyce,

Attached please find Stratus' response to EPA comments on the Draft Drum Removal Plan for the Neuhauser Landfill Site, Administrative Order on Consent Docket Number CERCLA-08-2018-0002.

Please don't hesitate to contact me if you have any questions or concerns.

In the meantime, we will submit the revised Work Plan per the attached response to comments within the time period required by the AOC.

Best regards,  
Dave

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**From:** Ackerman, Joyce [mailto:Ackerman.Joyce@epa.gov]  
**Sent:** Wednesday, November 22, 2017 5:01 PM  
**To:** Curtis Stovall - CDPHE <curtis.stovall@state.co.us>; Walker - CDPHE, David <david.walker@state.co.us>; MacGregor - CDPHE, Kelly <kelly.macgregor@state.co.us>; jason.king@coag.gov; Henderson, Jerry <jerry.henderson@state.co.us>; martin.ograde@state.co.us; ajkrieger@erieco.gov; fdiehl@erieco.gov; mostholthoff@erieco.gov; khansen@erieco.gov; tbjerkaas@erieco.gov; rdean@stratuscompanies.com; bfrissell@co.weld.co.us; Dave Folkes <DFolkes@Geosyntec.com>; Thomas J. Krasovec <TJKrasovec@Geosyntec.com>; Dave Stewart <Dave.Stewart@stewartenv.com>; Steeler Jon <JSteeler@sennlaw.com>; Piggott, Amelia <Piggott.Amelia@epa.gov>; O'Reilly, Maureen <O'Reilly.Maureen@epa.gov>; Fronczak, David <Fronczak.David@epa.gov>; Ketellapper, Victor <Ketellapper.Victor@epa.gov>; Jenkins, Katherine <jenkins.katherine@epa.gov>  
**Subject:** RE: Neuhauser Landfill Site: EPA comments on Draft Drum Removal Work Plan

And one last time with the attachment.

Joyce

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**From:** Ackerman, Joyce  
**Sent:** Wednesday, November 22, 2017 4:58 PM  
**To:** Curtis Stovall - CDPHE <curtis.stovall@state.co.us>; Walker - CDPHE, David <david.walker@state.co.us>; MacGregor - CDPHE, Kelly <kelly.macgregor@state.co.us>; jason.king@coag.gov; Henderson, Jerry <jerry.henderson@state.co.us>; martin.ograde@state.co.us; ajkrieger@erieco.gov; fdiehl@erieco.gov; mostholthoff@erieco.gov; khansen@erieco.gov; tbjerkaas@erieco.gov; rdean@stratuscompanies.com <rdean@stratuscompanies.com>; bfrissell@co.weld.co.us; Dave Folkes <DFolkes@Geosyntec.com>; Thomas J. Krasovec <TJKrasovec@Geosyntec.com>; Dave Stewart <Dave.Stewart@stewartenv.com>; Steeler Jon <JSteeler@sennlaw.com>; Piggott, Amelia <Piggott.Amelia@epa.gov>;

O'Reilly, Maureen <OReilly.Maureen@epa.gov>; Fronczak, David <Fronczak.David@epa.gov>; Ketellapper, Victor <Ketellapper.Victor@epa.gov>; Jenkins, Katherine <jenkins.katherine@epa.gov>

**Subject:** RE: Neuhauser Landfill Site: EPA comments on Draft Drum Removal Work Plan

My apologies – I had everyone's e-mail except Mr. Richard Dean. Sorry!

Joyce

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**From:** Ackerman, Joyce

**Sent:** Wednesday, November 22, 2017 4:55 PM

**To:** Curtis Stovall - CDPHE <curtis.stovall@state.co.us>; Walker - CDPHE, David <david.walker@state.co.us>; MacGregor - CDPHE, Kelly <kelly.macgregor@state.co.us>; jason.king@coag.gov; Henderson, Jerry <jerry.henderson@state.co.us>; martin.ogrady@state.co.us; ajkrieger@erieco.gov; fdiehl@erieco.gov; mostholthoff@erieco.gov; khansen@erieco.gov; tbjerkaas@erieco.gov; bfrissell@co.weld.co.us; Dave Folkes <DFolkes@Geosyntec.com>; Thomas J. Krasovec <TJKrasovec@Geosyntec.com>; Dave Stewart <Dave.Stewart@stewartenv.com>; Steeler Jon <JSteeler@sennlaw.com>; Piggott, Amelia <Piggott.Amelia@epa.gov>; O'Reilly, Maureen <OReilly.Maureen@epa.gov>; Fronczak, David <Fronczak.David@epa.gov>; Ketellapper, Victor <Ketellapper.Victor@epa.gov>; Jenkins, Katherine <jenkins.katherine@epa.gov>

**Subject:** Neuhauser Landfill Site: EPA comments on Draft Drum Removal Work Plan

Dear Mr. Dean and ladies and gentlemen – Attached please find EPA's comments on the Draft Drum Removal Work Plan for the Neuhauser Landfill Site. Please do not hesitate to contact me with any questions or concerns. Thank you for your assistance with this important project. (And Happy Thanksgiving!)

Joyce Ackerman  
On-Scene Coordinator and START P.O.  
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Joyce Ackerman  
On-Scene Coordinator  
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RE: Response to EPA comments on Work Plan for Neuhauser Landfill Site  
Administrative Order on Consent Docket Number CERCLA-08-2018-0002

SENT VIA E-MAIL to [Ackerman.Joyce@epa.gov](mailto:Ackerman.Joyce@epa.gov)

Dear Ms. Ackerman:

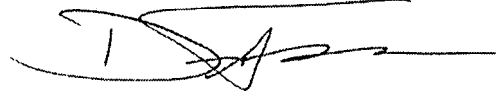
Geosyntec Consultants, Inc. (Geosyntec) is pleased to submit, on behalf of Stratus Redtail Ranch, LLC (Stratus), the attached responses to the United States Environmental Protection Agency (EPA) November 22, 2017 comments on the Draft Drum Removal Work Plan, dated November 10, 2017 (Work Plan), for the above referenced site (Site). The Work Plan was submitted to EPA to meet the requirements of a draft Administrative Settlement Agreement and Order on Consent (AOC), subsequently entered into voluntarily by the United States Environmental Protection Agency (EPA) and Stratus and made effective as of November 29, 2017, for removing buried drums located at the above Site. The Work Plan includes the following documents as required by the AOC: Health and Safety Plans (HASP); a Sampling and Analysis Plan (SAP), consisting of a Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP); and an Ambient Air Monitoring Plan (AAMP).

EPA's comments on the Work Plan are reproduced in the attached response to comments, in each case followed by Stratus' response in italics. Responses to the Colorado Department of Public Health and Environment (CDPHE) comments on the AAMP, which were agreed to by EPA, will be submitted separately.

Joyce Ackerman, EPA  
November 30, 2017  
Page 2 of 2

Please do not hesitate to call if you have any questions concerning this letter or the attached responses to comments.

Sincerely,  
Geosyntec Consultants, Inc.

A handwritten signature in dark ink, appearing to read 'David J. Folkes', with a long horizontal line extending to the right.

David J. Folkes, PE (CO)  
Senior Principal

Attachments:

Response to Comments

cc: Curt Stovall, CDPHE  
David Walker, CDPHE  
Richard Dean, Stratus  
Jonathan Steeler, Senn Visciano Canges, P.C.

Responses to EPA Comments on Draft Work Plan  
Administrative Order on Consent Docket Number CERCLA-08-2018-0002

*(responses are in italics, following each numbered EPA comment)*

Work Plan

1. Section 2 Site Location, Conditions and History: In the last sentence of the first paragraph on page 2, the word "northwest" should be listed before the word "north." The Denver Regional Landfill is northwest of the Site, and the Old Erie Landfill is north of the Site (based on the location of the Site as shown on Figure 1).

*The text will be revised as requested.*

2. Section 2: The narrative quotes a Stewart Environmental report estimating that approximately 100 to 150 drums are buried at the Site, rather than the 1,500 drums indicated in the AOC. EPA has not drawn any conclusions at this time regarding the number of drums which might be located at the Site. This sentence should be deleted.

*The text will be revised to state "Based on Stewart (2017b), approximately 100 to 150 drums are buried in the two primary areas identified by the July 2017 EM survey." This is still useful information for the purposes of the removal action.*

3. Section 3.1 Contractor Notification and Qualifications - Pursuant to Paragraph 21 of the AOC, EPA disapproves of using Stewart Environmental as a subcontractor for laboratory services for this removal action. Additional discussion on this comment is provided later in this attachment.

*Stewart Environmental will be replaced by TestAmerica Laboratories, Inc. in the Work Plan*

4. Section 4.1 Additional EM Surveying and Test Pitting: As stated in the cover letter, EPA is pleased to include additional geophysical investigations as part of the Work Plan in the AOC; however, EPA is not concluding that this additional investigation is sufficient to identify all locations of buried drums at the Site. EPA will be present to consult on and witness the test pitting of new locations for potential buried drums. The EPA OSC will approve adding newly identified locations of buried drums to the scope of work. Adding any such locations will be a valuable contribution to any future remedial effort at the Site.

*Stratus respectfully requests that EPA and CDPHE advise Stratus of any additional investigations that the agencies think are reasonable and necessary to identify any additional drums requiring removal at the site, so they may be addressed as part of the current removal action. Otherwise, Stratus understands that if unknown drums are encountered in the future through other activities, they may need to be addressed under applicable regulations, and suggests that such provisions could be*

*included as a contingency under any CDPHE-approved closure plan.*

5. Section 4.1 Additional EM Surveying and Test Pitting (page 6). The Work Plan references Figure 4 for the location of EM surveying information. However, Figure 4 is the project organization chart. Revise the Work Plan to reference the correct figure.

*The Work Plan will be revised to reference the correct figure, which will be added to the Work Plan (Figure 5).*

6. Section 4.2 Drums and Soil to be Removed: The second bullet on the top of page 7 refers to the black sludge and Figure 2. The location of the black sludge identified in Stewart 2017b is approximately 150 feet west of the "Approximate Sludge Removal Area" shown on Figure 2. Figure 2 should be modified to show a more accurate approximate location of the sludge removal area.

*Figure 2 will be modified as requested.*

7. Section 4.3 Scope of Work: There is a potential of exposing or disturbing debris and/or soil that may contain, or may be contaminated with, asbestos during surface and subsurface soil disturbing activities planned for the Site. This includes but is not limited to activities such as test pitting; construction of access roads, work areas, and security fencing; drum and soil removal; and work area restoration. If debris and/or soil containing or contaminated with asbestos is exposed or disturbed during these activities, it would trigger the requirements of Section 5.5 of the Colorado Regulations Pertaining to Solid Waste Sites and Facilities (Solid Waste Regulations) (6 Code of Colorado Regulations (CCR) 1007-2, Part 1). A plan is needed to identify and address any asbestos exposed during work activities at the Site. In practical terms, the plan should include using a Qualified Project Monitor(s) and/or Colorado Certified Asbestos Building Inspector(s) (Colorado CABIs) on an ongoing basis to look for suspected asbestos containing or contaminated soil or debris during soil disturbing activities on Site. If suspect material is found, the contractor may assume that the material is asbestos and implement the plan. A plan must be submitted prior to conducting any soil disturbing activities on Site.

*A CABI has been engaged by the removal contractor. An asbestos plan will be submitted to EPA along with notification of the CABI's qualifications*

8. Section 4.3 Scope of Work Phase I Site Setup -The Work Plan should include a utility locate as part of the Site setup activities.

*The Work Plan will be revised to require a utility locate.*

9. Figure 3 - EPA recommends that the phases of drum removal be re-prioritized, with drum removal beginning in the areas where a high number of drums are believed to be located, identified as Phases 2 and 3 on Figure 3.

*Stratus respectfully requests that the order of drum removal remain the same. The contractor would like to remove the smaller areas that are at higher elevations first; then complete the main drum removal area; and then complete the sludge removal. The contractor believes this will provide better access to the main drum area and better stormwater control.*

10. Section 4.3 Scope of Work-The Work Plan does not address anticipated procedures and location(s) of decontamination of heavy equipment. The Work Plan should be revised to include this information.

*This information will be provided in Section 4.3 of the Work Plan.*

11. Section 4.4 Removal Procedures - With regard to drum removal and staging, there will need to be procedures for determining what drums have similar waste and can be grouped together for sampling purposes. Such procedures will also be needed to avoid staging drums of incompatible waste near each other. Such procedures might include field testing such as hazard-categorization (haz-catting), visual observations, labels (if any), etc. The Work Plan should include anticipated procedures to be used; it may be necessary to modify these procedures in the field as work progresses and the types of wastes in the drums are observed.

*Haz-catting procedures will be provided in the Work Plan, including use of Spillyghter strips for initial assessment and grouping.*

12. Section 4.4.3 Characterization, Handling, and Disposal of Waste- With regard to sampling of waste in drums and contaminated soils for disposal purposes, it will be necessary to determine in advance what the profile requirements are for the intended disposal facility, e.g., a hazardous waste incinerator or landfill. This should be acknowledged in the Work Plan and more detailed written profile and sampling requirements be submitted in writing to EPA prior to conducting the sampling for disposal purposes.

*The need to determine in advance the profile requirements of intended disposal facilities will be added to Section 4.4.3 of the Work Plan. Detailed descriptions of the profile and related sampling requirements will be submitted to the EPA OSC in writing prior to such sampling.*

13. Section 4.4.3 Characterization, Handling, and Disposal of Waste- Related to the

comment above, the EPA OSC may require review of manifests and shipping papers prior to wastes being shipped off-Site.

*Comment acknowledged.*

14. Section 4.3 and Section 4.4.3 -As required by the AOC, disposal facilities proposed for shipment of waste containing CERCLA hazardous substances must be in compliance with the CERCLA off-Site rule. This applies whether the waste is considered RCRA hazardous waste or non-hazardous waste. The Work Plan should indicate that disposal facilities will be proposed in writing to the EPA OSC in advance of any shipments. Please refer to the AOC for additional requirements regarding Off-Site shipments.

*Comment acknowledged. The Work Plan will be revised to indicate that disposal facilities must be proposed to and approved by the EPA OSC in writing in advance of any shipments.*

15. Section 4.4 and elsewhere - With regard to soils, the goal for this EPA removal action is to remove highly contaminated soils that may cause an ongoing release of hazardous substances to groundwater. EPA is not setting a risk-based cleanup level for soils for this removal action. The Work Plan proposes appropriate criteria to use in the field to identify highly impacted soils for removal: soil visibly contaminated by leaking drum or container contents; soil with a strong odor consistent with drum or container contents; and soil with total VOC concentrations of 100 ppm or greater as determined by soil sample head-space screening using an FID.

Some sections of the Work Plan appear to use the criteria of "characteristically hazardous" or "non-hazardous" for soil removal (for example, Sections 4.4.2, 4.4.2.1, 4.4.2.2). These are not the criteria that will be used for soil removal as they are too narrow and would not cover soils which are highly contaminated with hazardous substances but are not included in the definition of RCRA characteristic hazardous wastes. These sections and any others in the Work Plan should be changed to reflect the criteria of visual inspection, odor, and headspace measurements. If unanticipated conditions are encountered in the field, such as different wastes than have been found to date, these criteria may need to be modified.

*The Work Plan will be revised in these and other sections, as applicable, to refer to the more complete soil removal criteria in Section 4.2, as listed in the comment above.*

16. Sections 4.3 and 4.4 - With regard to excavation and stockpiling of soils



overlying the drums which do not appear to be impacted, EPA anticipates that such soils will be left on-Site, probably returned to the excavated areas and re-graded for safety and drainage purposes. Prior to this action, sampling data for these stockpiled soils will be provided to the EPA OSC for approval to leave the soils on-Site. The Work Plan should state that such soils are anticipated to remain on- Site, pending approval by EPA.

*Sections 4.3 and 4.4 will be revised to state that stockpiled clean soils are anticipated to remain on-Site, pending approval by the EPA OSC.*

17. Section 4.4.1 Mobilization, Site Setup and Security (page 8) and Figure 3. The last sentence of the first paragraph refers to Figure 3. The excavation areas shown on Figure 3 deviate considerably from the EM anomaly areas shown on Exhibit A-1 from the NGPRS Geophysical Exploration Report. The excavation areas shown on Figure 3 should be revised to generally coincide with EM anomaly areas shown on Exhibit A-1. Also, the proposed Clean Soil and Impacted Soil stockpile areas shown on Figure 3 overlap some of the EM anomaly areas. Therefore, Stratus should consider relocating the planned stockpile areas to the south of the Phase 2 excavation area.

*Figure 3 will be revised to generally coincide with Exhibit A-1 of the NGPRS Geophysical Exploration Report. Soil stockpile areas will not be located over EM anomaly areas.*

18. Section 4.4.1.1 Temporary Drum and Soil Staging Areas (page 9). The second paragraph of this subsection of the Work Plan indicates that competent drums and overpacked drums will be placed within the temporary drum staging area. This implies that competent drums will be moved, staged and ultimately disposed as they were found. However, the third paragraph of Section 4.4.2 (page 10) states that drums and/or other containers deemed competent will be placed in an over-pack. Revise the appropriate section of the Work Plan for consistency.

*Section 4.4.2 describes the anticipated overpack requirements correctly. Section 4.4.1.1 will be revised accordingly. All drums will be placed in overpacks as the buried drums will not meet current regulation for transportation and disposal. Competent existing drums will be placed in new UN 51 approved drums and all other drum associated waste will be transferred to new UN approved drums for disposal for transportation and disposal.*

19. Section 4.4.1.1 Temporary Drum and Soil Staging Areas (page 9). If competent drums are to be managed and transported in as found condition, provision should be made to conduct initial removal of soil that may be stuck to the outside of the

drum.

*All drums will be overpacked to meet DOT requirements, per response to previous comment.*

20. Section 4.4.2.2 Vertical Extent of Excavation (page 11). The Work Plan states that excavation will not continue below the top of bedrock, if encountered. The Work Plan does not define whether the term top of bedrock means the top of weathered bedrock or top of competent bedrock. This distinction is important because there could be significant quantities of contamination bound to the matrix of the weathered bedrock beneath the drums. The distinction between weathered and competent bedrock can be difficult to make in the field and in part depends upon the type of equipment used for excavation. The scope of work of the removal action does not intend for excavation to continue to significant depths in areas that may have a thick zone of weathered bedrock. Revise the Work Plan to state that the final determination regarding the vertical extent of excavation will be made in coordination with the EPA OSC (similar to the statement made in Section 4.4.2.1). In general, the excavation will not extend more than a specified number of feet into weathered bedrock and will not extend beyond the point of refusal of the excavation equipment being used.

*Section 4.4.2.2 of the Work Plan will be revised to state that the vertical extent of the excavation will be made in coordination with the EPA OSC, based on the observed extent of materials meeting the soil removal criteria in Section 4.2, and may extend one to two feet into weathered bedrock but will not extend beyond the point of refusal of the excavation equipment being used.*

21. Sections 4.3 and 4.4 - Clarify the anticipated procedures for storage of drums pending disposal, whether in the gated, locked fenced staging area, or in a trailer, or some combination thereof.

*Sections 4.3 and 4.4 will be revised to clarify that drums will be staged in gated, locked, and fenced staging areas when trailers are not immediately available for offsite disposal. Pending weather and disposal logistics, some drums may be stored offsite at ACT's secure facility (up to 10 days) before being transported to the CERCLA approved offsite disposal facility.*

22. Sections 4.3. and 4.4 - Provide a description of how soils to be disposed off-Site are anticipated to be containerized, e.g., drums, rolloff boxes, etc. The Work Plan discusses drumming the "black sludge" contaminated soils, but does not provide a description for storage of other soils pending disposal.

*Sections 4.3 and 4.4 will be revised to describe how other soils will be stored*

*pending disposal. This will depend on the quantities encountered and the characteristics of the soils, but will include cubic yards boxes, drums, and rolloff boxes or trailers. Foam may be applied if needed for odor reduction.*

23. Section 6. Project Organization- typo for Joyce "Ackerman" and Ackerman.joyce@epa.gov.

*These typos will be corrected.*

24. Section 6 Project Organization (page 13) and Figure 4 and Section 2.1 and Figure 1 of the Quality Assurance Project Plan (QAPP). The description of key project personnel responsibilities must identify which project personnel have the direct authority to immediately stop project work (either in a specific work area or the entire Site) to address health and safety, quality control, or regulatory issues. If there are limitations to a project person's ability to stop work they must be identified in the Work Plan and QAPP.

*The Work Plan and QAPP will be revised to indicate that ALL personnel will have stop work authority to address health and safety, quality control, and/or regulatory issues.*

25. Section 9 Post Removal Site Control - As stated in the cover letter, EPA is not concluding that this additional investigation is sufficient to identify all locations of buried drums at the Site. Should additional drums be identified on-Site, EPA and the State will coordinate to determine the authorities best suited for the situation.

*Please see response to Comment 4.*

26. Section 9 Post Removal Site Control (page 15). The reference to "Erie Landfill" should be changed to "Neuhauser Landfill." CDPHE recently determined that the landfilling operations performed by John Neuhauser, doing business as Sanitation Engineering, were conducted in two separate areas located on the Redtail Ranch property, one immediately south of Old Erie Landfill, and the other immediately south of Denver Regional Landfill. Until recently, the Neuhauser landfilling operations were thought by CDPHE to have occurred within the boundaries of the Old Erie Landfill. The Erie Landfill and Old Erie Landfill are two distinctly different solid waste sites and facilities, with two different certificates of designation. Therefore, the two disposal areas on the Retail Ranch property should be referred to as the Neuhauser Landfill.

*Work Plan references to the "Erie Landfill" will be changed to the "Neuhauser Landfill," which we understand only applies to portions of the disposal areas on the Redtail Ranch property.*

27. Section 10 References (page 15). Stewart 2017a was approved by CDPHE with modifications. Therefore, CDPHE's approval with modifications letter dated May 12, 2017 should also be included in the list of references. Similarly, Stewart 2017b has yet to be approved. CDPHE's comment letter dated November 15, 2017 regarding Stewart 2017b should also be included in the list of references.

*The CDPHE approval and comment letters will be included in the list of references.*

28. List of Acronyms (page IV). Correct errors in the List of Acronyms and throughout the document: AOC -Administrative Settlement Agreement and Order on Consent  
ARARs - Applicable or Relevant and Appropriate Requirements  
VOCs - Volatile Organic Compounds

*These errors will be corrected in the List of Acronym and throughout the Work Plan as necessary.*

#### Field Sampling Plan

1. The Field Sampling Plan did not include field duplicates as part of the QA/QC. The Field Sampling Plan should be revised accordingly.

*The FSP will be revised to include field duplicates.*

2. Section 2.3 Soil and Sludge Sampling - The introduction suggests that soils and sludges will be sampled in-situ, rather than after being drummed or stockpiled. Clarify the anticipated sampling procedure to obtain representative samples for disposal purposes.

*The FSP will clarify that soils will be sampled after being drummed or stockpiled, unless otherwise approved by the EPA OSC. Like the procedure used for sampling drum contents, one sample may be used to characterize more than one drum of soil if the soil in all drums appears to be from a common source, based on the nature and source of contamination, haz-catting and drum information, as approved by the EPA OSC.*

3. Section 2.3.2.2 Sample Collection (for soils) - Where soils are to be analyzed for volatile organic compounds, soil samples should not be composited to avoid loss of volatiles during mixing. The sampling plan should propose either collection and VOC analysis of soils as discrete samples, or a multi-increment sampling strategy where small aliquots of soil are collected, extracted, and the extracts combined for analysis as a composite.

*The FSP will be revised to indicate discrete samples for soil VOC analysis, unless a multi-increment sampling strategy is employed.*

4. Section 2.4 Confirmation Soil Sampling - EPA is not establishing risk-based cleanup standards for soils for this removal action. Nevertheless, confirmation samples should be taken for documentation purposes and to verify that the project goal has been achieved to remove highly contaminated soils that could pose an ongoing source of release of hazardous substances to groundwater.

*Section 2.4 of the FSP will be revised to be consistent with the post-excavation sampling requirements of Section 4.4.2.1 (Horizontal Extent of Excavation) and Section 4.4.2.2 (Vertical Extent of Excavation) and Section 4.2 (Drums and Soil to be Removed) of the Drum Removal Work Plan.*

5. Section 1.2.1 Site Location (page 1): The word "northwest" should be listed before the word "north." The Denver Regional Landfill is northwest of the Site, and the Old Erie Landfill is north of the Site.

*The FSP text will be revised as requested.*

6. Section 1.2.2 Site Background (page 1). The first sentence states that the northern portion of the Site is known as the Erie Landfill, and that drums were accepted for disposal until circa 1968. This sentence should be revised to state that the northern portion of Site is a portion of the Neuhauser Landfill. Additionally, historic records indicate that drums were disposed at the Neuhauser Landfill until May 1969.

*The FSP text will be revised as requested.*

7. Section 4.2 (page 21) of Field Sampling Plan (7th bullet). Revise the Field Sampling Plan to clarify that decontaminated sampling equipment does not have to be wrapped in aluminum foil if the sampling equipment is to be reused the same day as per Section 2.3, Step 12 of SOP No. 600.

*The FSP text will be revised as requested.*

#### QAPP

1. Refer to previous comments on the Work Plan regarding: 1) field testing in order to group drums and identify incompatibilities; and 2) data needed for waste profiling for disposal purposes. These comments also apply to the QAPP and should be incorporated.

*The QAPP will be revised to be consistent with the Work Plan.*

2. Section 3.1.4 - Second bullet refers to excavated soil and sludge that is deemed "potentially hazardous." The soil removal criteria discussed previously in these comments apply to more than just soils that fail the TCLP, and this bullet should be revised. The same comment applies to Section 2.2.4, fifth bullet.

*Sections 3.1.4 and 2.2.4 of the QAPP will be revised to be consistent with the soil removal criteria in Section 4.2 (Drums and Soil to be Removed) of the Drum Removal Work Plan.*

3. Section 3.1.2 Step 1 - State the Problem-The problem statement references buried drums containing hazardous waste. This description is too narrow - it should reference buried drums containing CERCLA hazardous substances (which includes RCRA hazardous wastes).

*The QAPP text will be revised as requested.*

4. Section 3.1.4 - Where soils are to be analyzed for volatile organic compounds, soil samples should not be composited to avoid loss of volatiles during mixing. The sampling plan should propose either collection and VOC analysis of soils as discrete samples, or a multi-increment sampling strategy where small aliquots of soil are collected, extracted, and the extracts combined for analysis as a composite.

*The QAPP will be revised to indicate discrete samples for soil VOC analysis, unless a multi-increment sampling strategy is employed.*

5. Section 3.1.6-The third bullet refers to a criterion for RCRA hazardous waste characterization limits. The soil removal criteria apply to more than just soils that fail the TCLP, and this bullet should be revised.

*The QAPP will be revised to be consistent with Section 4.2 (Drums and Soil to be Removed) of the Drum Removal Work Plan.*

6. Tables - Many of the tables only list chemicals that are part of the TCLP analytical procedure. There are additional soil removal criteria and waste profiling requirements in addition to the TCLP. The tables should be revised.

*The QAPP tables will be revised as requested, to be consistent with the Section 4.2 of the Drum Removal Work Plan and waste profiling requirements.*

7. Pursuant to Paragraph 21 of the AOC, EPA disapproves of using Stewart Environmental as a subcontractor for laboratory services for this removal action. A review of some of the data packages from the Stewart Environmental laboratory

such as the waste and soil samples from 1/10/2017, groundwater samples from 12/12/2016, and groundwater samples from 12/15/2016, show missing information, unclear notations, errors in reporting, and other discrepancies. Some observations on the data packages include but are not limited to the following:

No quality control information was provided. Using the National Functional Guidelines for Superfund data usability, the data package would be rejected (unusable) because most of the QA/QC data is missing from the package. Therefore, it is not possible to ascertain the quality or usability of the data results.

It appears that notes were added to the waste and soil pdf document after the original laboratory report was written. It appears that the units were not listed in the original report but added at the bottom of the individual analyses in faint lettering, e.g., "All units are ppm." Laboratory reports for waste and soil - The descriptions of the samples do not match the chain of custody. The depths of the test pits are not correct and the waste sample from a drum is reported as a soil sample from Pit #5 at a 5 to 6 ft depth.

The chain of custody states one jar of sample was lost and could not be submitted for the 8270 analysis. The narrative report does not include a description of why the jar of sample was lost or why another jar of sample was not obtained.

The ACZ lab report references a solvent barrel from Pit #6, but there is no drum mentioned in the accompanying narrative report regarding a barrel in Pit #6

In a different data package provided by Test America from the 2017 Phase 2 report, the report notes that three sample vials submitted by Stewart Environmental were received with headspace bubbles.

*Stewart Environmental Laboratory will be replaced by TestAmerica Laboratories, Inc. in the QAPP.*

#### Ambient Air Monitoring Plan

1. The Plan should identify the proposed turnaround time for laboratory analysis of SUMMA canister samples. The turnaround time should be sufficiently short to allow corrective actions to be taken if the data indicates unacceptable air emissions are occurring from Site activities.

*The laboratory turn-around-times (TAT) for SUMMA canister samples will be identified in the AAMP. The TAT will be as short as the laboratories (ALS and/or TestAmerica) can provide.*

2. The Plan should state that laboratory results for SUMMA canister samples will be provided to the EPA OSC as soon as received.

*The AAMP will be revised as requested.*

3. The Plan should state that air monitoring data will be provided to the EPA OSC on a daily basis, such as providing the daily logs the morning after each day's recorded measurements. Exceedances of the action levels should be reported to the EPA OSC as soon as identified.

*The AAMP will be revised as requested.*

#### Health and Safety Plan

1. Global comment - In previous investigations, only two drums have been sampled at the Site. The 1991 IBM response to EPA's information request indicated that many more types of waste may have been transported and disposed at the Site than just MEK, toluene, MIBK, and trichloroethylene. The 1991 IBM response referenced waste organics, inorganics, solvents, acids bases, and other liquid waste streams including "cyanide, chromic, oxides, copper, caustics, barium and nitrate salts." The 1991 response provided estimates of the various wastes in terms of gallons believed to be shipped to the landfill in 1968. The H&S plan should take into account the other wastes that may be present at the Site. In addition, there is little to no information on any other wastes that the landfill operator may have accepted and disposed in the 1960s and the H&S plan should have procedures for potentially encountering unknowns. So far, the two drums sampled and the groundwater data show the presence of MEK, toluene, MIBK, TCE, and some other volatiles, but the H&S Plan should include procedures for encountering other wastes.

*The HASPs will be revised to take into account the potential for encountering drums or wastes containing the compounds listed above, as well as unknown wastes.*